

Listing of Claims:

1-9. (Canceled)

10. (Previously presented) A method of producing an additive for a battery plate paste, comprising the steps of:

mixing together water and lead oxide;

mixing sulfuric acid into the water and lead oxide mixture;

and

reacting the mixture of water, lead oxide and sulfuric acid in the presence of a seed amount of tetra basic lead sulfate to create TTBLS crystals.

11. (Original) The method of Claim 10, further comprising the step of micronizing the TTBLS crystals.

12. (Original) A method of producing an additive for a battery plate paste, comprising the steps of:

mixing together water and a lead oxide complexing agent to create a first substance;

mixing together the first substance with a tetra basic lead sulfate complexing agent to create a second substance;

mixing together the second substance with a sulfuric acid complexing agent to create TTBLS crystals.

13. (Original) The method of Claim 12, wherein the sulfuric acid is dilute.

14. (Original) The method of Claim 12, wherein the sulfuric acid is added at a slow constant rate, with vigorous mixing.

15. (Original) The method of Claim 12, wherein the lead oxide is high in orthorhombic lead oxide content.

16. (Original) The method of Claim 12, further comprising the steps of:

micronizing the TTBLS crystals.

17. (Original) The method of Claim 12, further comprising the steps of:

centrifuging the TTBLS crystals;

drying the TTBLS crystals; and

placing the TTBLS crystals through a micromill to create micronized TTBLS crystals.

18. (Original) The method of Claim 12, wherein the sulfuric acid adjusts the pH of the first substance.

19. (Original) The method of Claim 12, wherein the lead oxide comprises lead monoxide.

20. (Original) The method of Claim 12, wherein the TTBLS crystals comprise approximately 1-90% by total formula weight water, approximately 0.05-20% by total formula weight sulfuric acid, approximately 10-70% by total formula weight lead oxide, and

approximately 0.01-5.00% by total formula weight tetra basic lead sulfate.

21. (Original) The method of Claim 20, wherein approximately 1-2% of said sulfuric acid is added to the water to lower the pH of the water to approximately equal or less than 2.

22. (Original) The method of Claim 21, wherein approximately 5-10% by total formula weight sulfuric acid is added to the first substance.

23-26. (Canceled)

27. (Previously presented) A method of producing a battery paste, said method comprising the steps of:

mixing together a lead oxide complexing agent and a tetra basic lead sulfate complexing agent to create a first substance;

mixing together water and a sulfuric acid complexing agent to create a second substance;

mixing together the first substance with the second substance to create TTBS crystals;

micromilling the TTBS crystals to create a battery paste additive;

mixing together the battery paste additive with a battery paste mix.

28. (Currently amended) A method of producing a battery

plate paste, comprising the steps of:

creating a micronized tetra basic lead sulfate by reacting a mixture of:

lead oxide;

sulfuric acid; and

water;

in the presence of a seed amount of tetra basic lead sulfate; and

incorporating the micronized tetra basic lead sulfate into a battery paste mix.

29. (Canceled)

30. (Previously presented) A method of making a battery paste additive comprising the step of reacting a mixture of:

water;

lead oxide; and

sulfuric acid;

in the presence of a seed amount of tetra basic lead sulfate.

31. (Previously presented) The method of Claim 30, wherein the mixture comprises approximately 1-90% by total formula weight water, approximately 0.05-20% by total formula weight dilute sulfuric acid, approximately 10-70% by total formula weight lead

oxide, and approximately 0.01-5.00% by total formula weight tetra basic lead sulfate.

32. (Previously presented) The method of Claim 30, further comprising the step of mixing the additive into a battery paste to promote the formation of tetra basic lead sulfate in the battery paste.

33. (Currently amended) A method for making a battery plate, comprising the steps of:

mixing micronized tetra basic lead sulfate with a battery paste mix to create battery paste, wherein the tetra basic lead sulfate is produced by reacting a mixture of:

lead oxide;

sulfuric acid; and

water;

in the presence of a seed amount of tetra basic lead sulfate; and

curing the battery paste.

34-36. (Canceled)

37. (Currently amended) The method of Claim 10, wherein the lead oxide is in the form of ~~HT-100~~ orthorhombic lead monoxide produced in a high temperature barton reactor followed by particle segregation via air classification.

38. (Currently amended) The method of Claim 12, wherein the lead oxide complexing agent is in the form of ~~HT-100~~ orthorhombic lead monoxide produced in a high temperature barton reactor followed by particle segregation via air classification.

39. (Currently amended) The method of Claim 27, wherein the lead oxide complexing agent is in the form of ~~HT-100~~ orthorhombic lead monoxide produced in a high temperature barton reactor followed by particle segregation via air classification.

40. (Currently amended) The method of Claim ~~[[29]]~~ 28, wherein the lead oxide is in the form of ~~HT-100~~ orthorhombic lead monoxide produced in a high temperature barton reactor followed by particle segregation via air classification.

41. (Currently amended) The method of Claim 30, wherein the lead oxide is in the form of ~~HT-100~~ orthorhombic lead monoxide produced in a high temperature barton reactor followed by particle segregation via air classification.

42. (Previously presented) The method of Claim 11, wherein the TTBLS crystals have a median particle size of approximately 0.5 to 5.0 microns.

43. (Previously presented) The method of Claim 16, wherein the TTBLS crystals have a median particle size of approximately 0.5 to 5.0 microns.

44. (Previously presented) The method of Claim 17, wherein the TTBLS crystals have a median particle size of approximately 0.5 to 5.0 microns.

45. (Previously presented) The method of Claim 27, wherein the micromilled TTBLS crystals have a median particle size of approximately 0.5 to 5.0 microns.

46. (Previously presented) The method of Claim 28, wherein the micronized tetra basic lead sulfate has a median particle size of approximately 0.5 to 5.0 microns.

47. (Previously presented) The method of Claim 30, further comprising the step of micromilling the battery paste additive to a median particle size of approximately 0.5 to 5.0 microns.

48. (Previously presented) The method of Claim 33, wherein the micronized tetra basic lead sulfate has a median particle size of approximately 0.5 to 5.0 microns.

49. (Previously presented) The method of Claim 27, wherein the step of mixing together the battery paste additive with a battery paste mix comprises the step of adding the battery paste additive to the battery paste mix at a dosing level of approximately 0.25% to 5.00% of the weight of lead oxide in the mix.

50. (Previously presented) The method of Claim 28, wherein the step of incorporating the micronized tetra basic lead sulfate into a battery paste mix comprises the step of adding the micronized tetra basic lead sulfate to the battery paste mix at a dosing level of approximately 0.25% to 5.00% of the weight of lead oxide in the mix.

51. (Previously presented) The method of Claim 32, wherein the step of mixing the additive into a battery paste comprises the step of adding the additive to the battery paste at a dosing level of approximately 0.25% to 5.00% of the weight of lead oxide in the mix.

52. (Previously presented) The method of Claim 33, wherein the step of mixing the micronized tetra basic lead sulfate with a battery paste mix comprises the step of adding the micronized tetra basic lead sulfate to the battery paste mix at a dosing level of approximately 0.25% to 5.00% of the weight of lead oxide in the mix.